

Site Application Template

Introduction

A Site Application Template is a tool to assist designers in providing complete applications and eliminate unnecessary paperwork. Designers who are new to King County and are unfamiliar with the paperwork and code requirements can also benefit from this template.

The designer responsibilities include:

- Knowing the requirements of Title 13 prior to submitting a design
- Submitting complete applications (**Note:** it is not acceptable to design by review, where the designer uses the Health Department deficiency report to determine how to design the system).
- Being familiar with the technology proposed on the design, meeting all minimum standards and qualifications for designing the type of system. (i.e., Glendon Bio-filters require designers to be specifically certified to do so by Glendon).
- Being familiar with all applicable laws governing designer licensing in Washington
- Knowing relevant design issues and pertinent policy and procedures particular to King County.
- Knowing specific inspection and asbuilt protocols in King County.
- For Professional Engineers, practicing within your area of expertise and knowledge.

Common Errors and Omissions

- Not providing sufficiently detailed instructions to easily locate the site
- Not flagging the site, trails or soil logs. Flagging inadequately secured to prevent removal by natural elements.
- Insufficient detail to show that the system can be installed as designed. Vertical separation at site cannot be maintained at proposed trench depth due to undulating or irregular topography or topography at site cannot be observed due to heavy vegetative cover. In some cases the site needs to be brushed and the lines staked and strung to adequately demonstrate that the site can accommodate the design proposal.
- Supplying contradictory information within the design (not changing template information to match the particular design).
- Not showing or addressing specific site conditions on the SSAS detail drawing that will affect an installation (i.e., large trees, steep slopes, cuts, wetlands, drainage issues, etc.).
- Soil Logs not properly dug- (requirements include: minimum 24" in diameter top to bottom, depth to restrictive layer or deep enough to demonstrate vertical separation stated in design).

Cover Letter

Page 1 of Submission

- Provide a cover letter whenever there are circumstances that require special consideration. For example, expecting a denial regarding a specific code requirement so that it may be appealed to the Sewage Review Committee or if there are access issues that require special permission or considerations (dogs, fences, locked gates, crossing a neighbors property, etc.)
- If a revision is being submitted and you know the previous reviewer from the Health Department, please identify them in the cover letter.
- All applications require a fee. Typically resubmission fees are stated in the denial letter. For more specific fee information see the fee table and memorandum on resubmissions.
- All fee waivers or reductions require approval by the District Supervisor. If a fee has been officially waived or reduced by the supervisor, state this in the cover letter. The application will then be routed to the supervisor for verification.
- On any resubmission (applications that have been denied and resubmitted with the deficiencies addressed) include a copy of the deficiency letter.

Note: definitions

1. **Revision-** considered to be only minor changes or alterations of an already approved design that doesn't typically require a field visit. (i.e., tank locations changes or building envelope alterations.)
2. **Resubmission-** follow-up design to address application deficiencies of a disapproved design.
3. **Renewal-** a design of an expired or nearly expired previously approved site application. Processed as if a new site application. Soil log holes should be reopened and properly flagged as if a new application. Please note on the cover letter that this has a previous approved site application.

Site Design Application Form

Page 2 of Submission

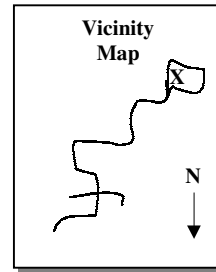
(you can obtain a current copy of this form by visiting The King County Wastewater Web Page at: metrokc.gov/health/wasteh2o/forms/sitesdesignappform.pdf)

- Make sure all information submitted is accurate and up to date
- Make sure the cover page has been fully completed before submitting; write in N/A if a category does not apply.
- Addresses to vacant properties are to follow proper address numbering/directional protocol, there should be no X's used to approximate an address.
- 4 separate copies are to be properly collated prior to submission, this includes cover sheets. All packets should be stapled individually. License stamps should minimally appear on the site application form and SAS detail drawing.
- Use the designer check list to make sure all steps have been completed- this can be obtained on the Wastewater Web Page: metrokc.gov/health/wasteh2o/forms/sitesdesignchecklist.pdf
- All applications submitted must have the appropriate fee associated with the application.

Detailed Vicinity Map

Page 3 of Submission

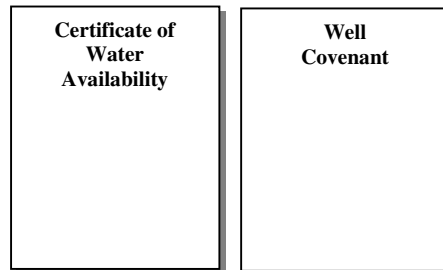
Locating the site:



- Please provide more detail than just a map page with an arrow or highlight mark.
- Give descriptive landmark location points to help direct staff to the site, if we can't find it we can't review it. Valuable time is wasted causing unnecessary delays in the review process when we cannot locate the property or access the site the first time. Keep in mind that some staff who will be assigned the review may not be familiar with the area.
- Locate a vehicle parking area on the map that will allow staff to walk to the drainfield design area.
- All sites are to be flagged or signed, with the designer and client name at the entry point to the lot.
- If the pathway to the soil logs is not obvious, provide flagging or indicators to lead staff to the soil log holes. Make sure the trail is sufficiently cleared of vegetation for easy access. This applies to the well site location if applicable.
- Sites that are gated or locked should be identified in the cover letter. In these cases provide a key or specific instructions on how to access the site.

Water Information:

Page 4 of Submission



Provide the following depending on the circumstances of the particular site:

- **Public Water Supplies- Water availability letter-** the letter must identify the specific parcel water is available to, the date and the length of time the letter is valid with an appropriate authorizing signature. For existing residences (repairs, upgrades, etc.) a copy of the most recent water bill is required.
- **Community Wells-** must be current with all sampling requirements, in order to be in compliance. It must also be approved for the number of connections. Provide the Community well name and state ID Number.
- **Private Wells- Well covenants-** must meet current code requirements- all new building footprints must be outside the 100-ft. protective radius. Covenants must be recorded prior to approval of the site application.
 - **Restrictive Covenants-** any portion of the 100 ft protective radius that is on a neighboring property must have a recorded restrictive covenant granted from the neighboring property owner.
- **Water production private wells-** Supply adequate information to demonstrate the aquifer's ability to provide the required 400 gallons per day by either:
 - Drilling the well and conducting a 4 hour pump test (note a well site inspection approval is necessary before drilling a private well) **or**

- Supply **well logs** or **pumping reports** from adjacent lots on 2 to 4 sides of the parcel that adequately demonstrate the ability of the aquifer to produce the required 400 gpd. (**Note:** Bailer tests are not acceptable). Provide a location map of the well logs submitted in relationship to the site under review **And**
- Any other information the health official determines to be appropriate to demonstrate adequate water supply. **Note:** in areas of known low production you may be required to drill the well and perform a 4 hour pump test during the dry months to verify adequate water production.¹
- **For private wells provide the Lot segregation date if less than 5 acres-**, any lot less than 5 acres must have been legally segregated prior to May 18, 1972.
- Make sure the well location on the overall site plan coincides with the location narrative on the covenant.

Note: Document submission standard: All Documents submitted must be legible, meaning there should be no line or letter bleeding or line break ups. Whenever possible supply an original document or high quality first generation copy for the Health Department document package that will become public record. Second and third generation copies or faxes generally don't meet the standard. Exceptions can be made when there is no practical way to obtain a high quality copy of the original document.

Legal Documents:

Page 5 of Submission

Examples:

- **Drainfield Easements**
- **Right of Way (ROW) permits**
- **Sensitive Area documents** (from the building official, DDES, etc.)

Note: Clearly incorporate the easements, sensitive areas, setbacks and buffers relative the septic system components onto the OSS site design drawing.

Detail Drawings:

Page 6 of Submission

Detail Drawings	

On one piece of paper provide detail drawings of the following:

- **Manifold diagram** showing all angles and control valve arrangements.
- **Upturn/inspection port diagram-** lateral clean-out/inspection ports (PD systems). Indicate how the ports are to be anchored and capped.

¹ You may contact the Health Departments Water program staff to help in determining if you are in an area of known low production.

- **Trench Cross Section-** Show trench make up relative to vertical separation at site, especially critical on sloping sites. Show % slope and how the trench will meet vertical separation requirements.
- **Gravelless chambers-** if they are used, detail any step-down set-up, if a PD system is used show how the laterals are to be anchored with orifice orientation. Clearly show how the chambers will be laid out and connected on the SSAS detail drawing.

Hydraulic Calculation Summary Sheet:

Page 7 of Submission

Provide basic calculations for evaluation any pressure system
The following is an example for a PD system

Pressure Distribution System Summary Sheet

For: _____

Transport Pipe Length _____ Ft Diameter _____ Inch Class _____
Manifold Pipe Length _____ Ft Diameter _____ Inch Class _____

Manifold Type:

Central _____ End _____ Header _____

Lateral Diameter _____ Inch Longest Lateral Length _____ Ft Class _____
Longest Allowed Lateral Length _____ Ft

Orifice Size _____ Inch Spacing _____ Ft Total # of Orifices _____

System Flow Rate(Orifice Discharge Rate X # of Orifices) _____ X _____
Gal/Min(GPM)

Friction Losses

Transport Pipe _____ Ft
Manifold _____ Ft
Laterals _____ Ft
Fittings/Valves _____ Ft
Elevation _____ Ft

Total Dynamic Head _____ Ft

Required Pump Capacity _____ Gal/Min(GPM)

Total Dynamic Head(TDH) _____

Pump Size _____ Pump Model _____

Pump Tank Model _____

Pump Tank (Gal/Per/Inch) _____

Dose Volume _____ Gallons

Doses Per Day _____

Design/Installation Specification Sheet

Page 8 of Submission

Examples would be:

- Amount and quality of fill required and where it is to be stockpiled on site
- Identify material staging area for site construction
- Specifications of Timer (make and model)
- Maximum foundation cuts and location of foundation drains
- Pre installation conference requirements if indicated
- Other detail construction notes as needed for the specific site of system type proposed

Support Diagrams and Drawings According to System Type:

Page 9 of Submission

Septic and Pump tank vertical section detail drawings with:

- Inlet and outlet invert elevations or minimum and maximum elevation of installation
- Maximum depth of cover over tanks
- Seasonal groundwater elevation in relation to tanks
- Pump tank component locations
- Position of float switches (located on a separate float tree) for dose volume, alarm, etc.

Other drawings according to system type:

- SF drawings as specified in the ISF: Best Methods and Practices for Design, Construction and Inspection (July 16, 1999)
- Glendon systems diagrams- see Glendon Biofilter (GBT) Review Guidance (July 2, 1999)
- ATU/ disinfection drawings and specifications

Overall Plot Page

Page 10 of Submission

Using the largest scale that will allow the entire parcel plot to be presented on a single sheet of 8.5 x 11 sheet of paper (maximum allowable, 11X17).

See Title 13 for specific detail requirements (page 39-40)

Site Design Drawing: SAS Detail Drawing

Page 11 of Submission

(See Title 13 pages 40-41)

Scaled at 1"=20' or 1"= 30' with a maximum paper size of 11x 17

Include:

- North arrow indicator
- Plumbing Stub Elevation
- Elevation of highest lateral

- **Trench Widths**, lengths and horizontal separations for primary and reserve
- All tanks and piping necessary to allow distribution of effluent to the soil absorption components
- Drainage characteristics including direction of surface drainage
- Topographical contours at 2 ft. intervals over the OSS area
- Max. building footprint(s)
- Location of all soil logs
- Well locations and water lines with 100ft protective radius
- Property and easement lines
- Design control point(s)
- Setback features

Soil Log Information

Page 12 of Submission

This page should include the following:

- Name of the person doing the soils analysis
- Date soils were logged
- A log hole number that corresponds to the one used at the site.
- Soils description for each soil log identified in the primary and reserve drainfield areas (see page 39 of Title 13 for specific requirements)